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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------------|------------------------|
| 10/531,501 | 04/10/2006 | Philippe Cathelin | 91170-00019USPX | 1199 |
| 32914 7590 11/16/2007 GARDERE WYNNE SEWELL LLP INTELLECTUAL PROPERTY SECTION 3000 THANKSGIVING TOWER 1601 ELM ST DALLAS, TX 75201-4761 | | | EXAMINER CHEN, JUNPENG | |
| | | | ART UNIT 2618 | PAPER NUMBER |
| | | | MAIL DATE 11/16/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/531,501 | Applicant(s) CATHELIN, PHILIPPE | |
| | Examiner Junpeng Chen | Art Unit 2618 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 15-18 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15-18 and 25-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendment/arguments filed on 08/20/2007. Independent claims 1, 9 and 25 have been amended. Claims 1-12, 15-18 and 25-31 are pending. **This action is made FINAL.**

Response to Arguments

2. Applicant's arguments with respect to amended independent claims 1, 9 and 25 have been considered but are moot in view of the new ground(s) of rejection.

Regarding independent claim 9, Applicant has attempted with interpret the recitation "reduced to" as "scaled to", and given an example of frequency spacing of 200 kHz for output receiving frequency in the vicinity of 1.8 GHz corresponding to the frequency spacing of 400 kHz for frequency of the signal SSP of 3.6 GHz. However, it is unclear how applicant's example relates to the confusion.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-12, 15-18 and 25-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one

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skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Consider **claims 1 and 25**, each claim recites “wherein the spacing between the reference frequency of the main loop and a whole integer multiple of the transmit or receive frequency is at least the cut-off frequency of the main loop”. However, the specification fails to provide a detail description to support the limitation “the spacing between the reference frequency of the main loop and a whole integer multiple of the transmit or receive frequency”. In addition, the specification fails to clearly describe how “the spacing... is at least the cut-off frequency of the main loop”.

Claims 2-8 and 26-30 are rejected for the same reason above.

Consider **claim 9**, it recites “wherein the first reference signal has a frequency equal to a frequency spacing of channels of an RF signal generated from the local oscillator output signal”. However, the specification fails to provide a detail description to explain how the first reference signal (i.e. SRFA in Figure 3) is equal to a frequency spacing of channels of an RF signal generated from the local oscillator output signal (i.e. SSP in Figure 3).

Consider **claim 9**, it further recites “if a frequency of the local oscillator output signal were reduced to a frequency of the second reference signal”. However, the specification fails to provide a detail description to explain how the frequency of the local oscillator output signal (i.e. SSP in Figure 3) was reduced to (scaled to) a frequency of the second reference signal (i.e. SRFP in Figure 3).

Claims 10-12, 15-18 and 31 are rejected for the same reason above.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12, 15-18 and 25-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the spacing" in lines 12 and 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the reference frequency" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Consider **claim 1**, as amended, it recites a limitation "the first reference of the main loop is... c) removed from a frequency which is a whole integer multiple of the transmit or receive frequency". It is unclear how is the reference frequency of the main loop is removed from (set away from or distance from) a frequency which is a whole integer multiple of the transmit or receive frequency.

Claims 2-8 are rejected for the same reason above.

Consider **Claim 9**, it recites the limitation "if a frequency of the local oscillator output signal (i.e. SSP in Figure 3) were reduced to a frequency of the second reference signal (i.e. SRFP in Figure 3)". However, according to paragraph [0062] of the specification of present application, it is "the reference frequency of the auxiliary loop (i.e. SRFA in Figure 3) is equal to the frequency spacing of the channels, reduced to the reference frequency of the main loop (i.e. SRFP in Figure 3)". Thus, it is unclear what is

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reduced to a frequency of the second reference signal (reference frequency of the main loop).

Claims 10-12, 15-18 and 31 are rejected for the same reason above.

Claim 25 recites the limitation "the spacing" in line 16. There is insufficient antecedent basis for this limitation in the claim.

Claim 25 recites the limitation "the reference frequency" in lines 16 and 17. There is insufficient antecedent basis for this limitation in the claim.

Consider **claim 25**, as amended, it recites a limitation "the first reference is... removed from a frequency which is a whole integer multiple of the transmit or receive frequency". However, Applicant fails to clearly define the meaning of "removed from a frequency which is a whole integer multiple of the transmit or receive frequency". It is unclear how is the reference frequency of the main loop is removed from (set away from or distance from) a frequency which is a whole integer multiple of the transmit or receive frequency.

Claims 26-30 are rejected for the same reason above.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any response to this Office Action should be **faxed to (571) 273-8300** or **mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Junpeng Chen whose telephone number is (571) 270-1112. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Junpeng Chen
J.C./jc


NAY MAUNG
SUPERVISORY PATENT EXAMINER